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ABSTRACT

Eighty-three students enrolled in five graduate sections of educational research taught by the same instructor were administered a reading attitude scale and an educational research attitude scale. Under-graduate grade point averages (GPAs), entering graduate GPAs, and composite National Teacher Examination (NTE) scores were also obtained for the students. Teachers who were currently involved in the teaching of reading had significantly higher reading attitude scores than the teachers who were not involved in the teaching of reading. All independent variables were significantly related to course achievement. Results of a stepwise regression analysis yielded a multiple correlation of .77 when NTE scores, graduate and undergraduate GPAs, reading attitude and research attitude scores were used to predict achievement in the course. (Author)

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The Relationship of Graduate Education Students' Achievement in Educational Research to Their Reading Attitudes, Attitudes toward Educational Research, GPAs, and National Teacher Examinations

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Abstract

Eighty-three students enrolled in five graduate sections of educational research taught by the same instructor were administered a reading attitude scale and an educational research attitude scale. Undergraduate GPAs, entering graduate GPAs, and composite National Teacher Examination (NTE) scores were also obtained for the students. Teachers who were currently involved in the teaching of reading had significantly higher reading attitude scores than the teachers who were not involved in the teaching of reading. All independent variables were significantly related to course achievement. Results of a stepwise regression analysis yielded a multiple correlation of .77 when NTE scores, graduate and undergraduate GPAs, reading attitude and research attitude scores were used to predict achievement in the course.

It is generally held that favorable teacher attitudes toward reading will promote favorable attitudes in students and that favorable student attitudes toward reading will have a salutary effect on the achievement of those students in courses requiring a great deal of reading. However, Jerrolds, Benton, and McCutcheon (1975) have pointed out that because attitudes are partially emotional in their origins and often illogical in their manifestations, the relationships between attitudes and academic achievement are complex and unclear.

Schofield (1980) stated that,

> In literature relating to elementary school reading it is commonly contended that attitudes toward reading influence achievement in reading and that teachers' attitudes (and achievement) affect pupils' attitudes and achievement. As yet there is little research support for this contention. (p. 111)

Schofield's research results showed the complex nature of these relationships. He found that,

> ...high achievement and high attitude in teachers were positively associated with high achievement and high attitudes in pupils; in pupils of low achievement and low attitude teachers, achievement was low, but the attitudes were more favorable than those expressed by the pupils of middle achievement and middle attitude teachers. (p. 111)

Groff (1962), Askov and Fischbach (1973), and others did find that children's reading attitudes are related to some degree to their reading achievement. However, Elliott (1982) stated that a review of the literature revealed very little research related to the attitude toward reading for the college level student.

Mueller (1973) reported that many teachers did not value reading very highly, based on her informal assessment. Mueller did not examine

the attitudes of different groups of teachers. It is reasonable to expect that those teachers responsible for teaching reading would have a more positive attitude toward reading than those teachers who do not teach reading, yet previous research has not adequately examined this question.

One method of beginning to sort out the complex nature of teachers' reading attitudes is to investigate the extent to which those reading attitudes relate to other variables in the teacher training process. Isakson and Ellsworth (1979) and Benton and Jerrolds (1963) found that taking a course in educational research improved subjects' attitudes toward educational research. However, Napier (1979) and Benton and Jerrolds (1983) found that research attitude scores were not significantly related to achievement scores in the course. Thus it appears the relationship of attitude and achievement should be further investigated.

The present study grew out of the 1982 Forum paper presented by Joan Elliott and makes use of the instrument she designed for use in that study. As in the Elliott study, the focus of the present study on attitudes of teachers toward reading. The specific objectives of this study were to:

1. examine the attitudes toward reading of graduate education students.
2. compare attitudes toward reading of graduate education students who teach reading with the attitudes of those who do not teach reading.
3. determine whether undergraduate GPAs, graduate GPAs, composite National Teacher Examination (NTE) scores, or attitudes toward educational research are significantly related to reading attitudes.

4. determine if attitudes toward reading are significantly related to achievement in a course having a heavy reading component.
5. determine whether undergraduate GPAs, graduate GPAs, composite NTE scores, or attitudes toward educational research are significantly related to course achievement.

Method

Subjects

Subjects were drawn from 83 students enrolled in five graduate sections of educational research during winter, spring, and summer quarters of 1983 at North Georgia College. Three students who were repeating the course were eliminated from the study, leaving a total of 80 subjects. All sections were taught by the same instructor.

Undergraduate GPAs were available for 76 students. Entering graduate GPAs at the beginning of the course were available on 59 of the subjects. (For 17 of the subjects, this was their first quarter in the graduate program, and data were not available for four transient students.) For admission to the graduate program, North Georgia College requires the NTE, the Graduate Records Examination (GRE), or the Miller Analogies Test (MAT). Forty-one of the subjects had composite NTE scores on record; six had NTE common scores; nine had the GRE; ten had the MAT; ten students were classified as non-degree status, pending submission of one of these test scores; and four were transient students.

Instruments

Attitude toward reading was measured by the 26-item Likert-type scale developed by Elliott (1983). Her reading attitude scale is an instrument designed to measure the attitudes of college students toward reading in three areas: school related reading, recreational reading, and general reading. Elliott has reported the reliability of the instrument to be between .80 and .90 using coefficient alpha.

Achievement in the educational research course was measured by two multiple-choice examinations constructed by the instructor of the course. All students took the same midterm and final examinations. All items on the examinations were matched with objectives for the course. Approximately one-half of the items were taken from the instructor's manual that accompanied the students' textbook (Ary, Jacobs, and Razavieh, 1979). The reliability estimate (KR21) of the midterm examination was .84, and for the final examination the reliability estimate was .87.

Attitude in the course was measured by the Attitudes toward Educational Research Scale (ATERS) administered on the last day of classes. To give greater assurance that the subjects would be truthful in their responses to this attitude instrument, subjects were told that their scores would have no effect on their grade in the courses and that, in fact, the ATERS would not be scored until their grades had been turned in.

ATERS is a 50-item Likert-type scale, designed by Isakson and Ellsworth (1979), which measures teachers' attitudes toward educational research. The authors of the instrument have reported an internal consistency reliability of .92 using coefficient alpha. The authors of the instrument report a number of construct validity studies indicating

there is reason to believe the instrument to be an acceptable tool for examining teachers' attitudes toward educational research.

Andrews, Blackmon, and Mackey (1980), describe the purpose of the NTE as follows:

> The National Teacher Examinations are standardized, secure tests that provide objective measures of academic achievement for college seniors completing teacher education programs and for advanced candidates who have received additional training in specific fields. (p. 359)

The NTE is one of the most commonly used standardized instruments that an undergraduate or a graduate student in education may elect to use as evidence of qualifications to do college or university work.

Analyses

An independent t-test was used to determine if the mean score on the reading attitude instrument of the teachers of reading was significantly greater than the mean scores of the teachers not teaching reading. Pearson product-moment correlations were computed to determine the relationships between the composite achievement scores, reading attitude scores, ATERS scores, undergraduate GPAs, entering graduate GPAs, and Composite NTE scores. Data for the subjects were then submitted to four stepwise regression analyses for predicting achievement in the course. The first analysis included all 80 subjects who had scores on the reading attitude and the ATERS. The second analysis included the 76 subjects who had these two measures plus undergraduate GPAs. The third analysis included the 59 subjects who had these three measures plus entering graduate GPAs. In the fourth analysis, 32 subjects had scores on all of the measures.

Results

Data from this study indicate that graduate education students have a positive attitude toward reading. The mean score for these 80 subjects on Elliott's scale was 100.79 of a possible 150. Only 10 of the 80 subjects had scores below 78, indicating that they had a negative attitude toward reading.

It was hypothesized that the teachers who were currently involved in the teaching of reading would have significantly higher reading attitude scores than the teachers who were not involved in the teaching of reading. This hypothesis was supported ($t = 1.92$, $df = 78$, $p < .05$, one tailed test). The average attitude score for the reading teachers was 104.70, and the average for the teachers not teaching reading was 96.87.

The correlation matrix for the six variables is presented in Table 1. Reading attitude scores were significantly correlated with achievement (.36), ATERS scores (.31), graduate GPAs (.30), and the Composite NTE (.54). Reading attitude scores were not significantly correlated with the undergraduate GPAs (.09).

The composite achievement mean was 110.00 (out of a possible of 132), with a standard deviation of 14.48. Results of correlating the achievement of the students with predictor variables of reading attitude, ATERS, undergraduate GPAs, entering graduate GPAs, and NTE scores are also included in Table 1. Means and standard deviations for the predictor variables are included in Table 2. The single best predictor of success in educational research, as measured by the two objective examinations,

was graduate GPAs (r = .62). Composite NTEs, undergraduate GPAs, the ATERS, and reading attitudes were all significantly related to achievement (rs = .59, .46, .37, and .36, respectively).

Results of the first stepwise regression analysis yielded a significant multiple correlation of .45 when both reading attitude and ATERS scores were used to predict achievement. In the second stepwise regression analysis a significant multiple R of .61 was obtained when undergraduate GPAs, ATERS scores, and reading attitude scores were used to predict achievement. The proportion of variance accounted for by using these three predictors was .37. In the third regression analysis when graduates GPAs were included in the analysis, a significant multiple R of .72 was obtained, and the proportion of variance accounted for by using four predictors was .52. Finally when NTE scores were included in the fourth analysis, a significant multiple R of .77 was obtained, and the proportion of variance accounted for was .59. In all of the stepwise regressions the multiple Rs obtained were significant at the .01 level. Results of the last three stepwise regression analyses are presented in Table 3.

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TABLE 1

Correlation Matrix for Achievement in Educational Research and Five Predictor Variables

	Achievement	Reading Attitude	ATERS	Undergrad GPA	Grad GPA	Composite NTE
Achievement	1.00	.36** (n=80)	.37** (n=80)	.46** (n=76)	.62** (n=59)	.59** (n=41)
Reading Attitude		1.00	.31** (n=80)	.09 (n=76)	.30* (n=59)	.54** (n=41)
ATERS			1.00	.11 (n=76)	.42** (n=59)	.22 (n=41)
Undergrad GPA				1.00	.31* (n=59)	.37* (n=41)
Grad GPA					1.00	.32 (n=32)
Composite NTE						1.00

*Significant at .05 level
**Significant at .01 level

TABLE 2

Means and Standard Deviations of Predictor Variables and Correlations between those Variables and Composite Educational Research Examination Scores

Predictor	n	Mean	Standard Deviation	Correlation
Reading Attitude	80	100.79	18.97	.36*
ATERS	80	190.18	19.36	.37*
Undergrad. GPA	76	2.97	.50	.46*
Grad. GPA	59	3.62	.41	.62*
Composite NTE	41	1211.78	144.90	.59*

*Significant at .01 level

TABLE 3

Summary of Stepwise Regression Analyses for Predicting Achievement in Educational Research

n = 76

Step	Predictor Variable Entered	R	R^2	F
1	Undergraduate GPA	.46	.21	19.64*
2	ATERS	.56	.32	16.90*
3	Reading Attitude	.61	.37	13.99*

*Significant at .01 level

n = 59

Step	Predictor Variable Entered	R	R^2	F
1	Graduate GPA	.62	.38	34.88*
2	Undergraduate GPA	.69	.48	24.82*
3	Reading Attitude	.72	.52	19.59*
4	ATERS	.72	.52	14.58*

*Significant at .01 level

n = 32

Step	Predictor Variable Entered	R	R^2	F
1	NTE	.65	.42	21.81*
2	Graduate GPA	.75	.57	18.91*
3	Reading Attitude	.76	.57	12.54*
4	Undergraduate GPA	.77	.59	9.54*
5	ATERS	.77	.59	7.35*

*Significant at .01 level